

VIVEK PANCHAL

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EDUCATION

University of Colorado, Boulder, Master of Science in Mechanical Engineering Specialization in Design [GPA: 3.8]	Boulder, CO Graduation Date: May-2020
Delhi Technological University, Bachelor of Technology in Mechanical Engineering (BSME) Percentage: 72.18 %	New-Delhi, India Graduation Date: May-2016

SKILLS

CAD: SolidWorks, PTC Creo (Pro-E), AutoCAD, Inventor, Unigraphics NX, CATIA
Analysis: ANSYS Fluent and Structural, Abaqus, MATLAB/Simulink, FEA, CAE.

Computer Skills: C/C++, Arduino, Microsoft Word, PowerPoint, Excel, Outlook, KeyShot
Soft Skills: Analytical and Critical Thinking, Team Player, Customer Service, Problem Solver, Marketer.

ENGINEERING WORK EXPERIENCE

ESCORTS AGRI MACHINERY, R&D DIVISION July 2016 – July 2018

Assistant Manager, Vehicle Design and Integration

- Designed and validated assemblies of throttle, brake, clutch, power take-off and hydraulic lift linkages of new tractors for domestic and export markets.
- Designed running board, cabin structure and roll-over protection structure for tractors under New Escorts Tractor Series.
- Rectified field issues for tractors under Escort's Farmtrac brand.
- Managed database in Oracle for tractor part and assembly codes.

FREELANCE MECHANICAL DESIGNER

Nov. 2014 – July 2018

- Designed, Rendered and Simulated 3D models and assemblies according to client's requirements.
- Worked with hundreds of firms and individual clients on projects related to mechanical engineering.

PREMIUM TRANSMISSION LTD. (INTERN)

June – July 2015

- Designed and validated 3D Models, in PTC Creo 2.0, of a series of gearboxes using specification sheets as per ISO Standards.
- Used Geometric Dimensioning and Tolerancing (**GD&T**) for 2D engineering drawing development.
- Studied manufacturing process of gearboxes including CNC machining and metal casting.

JCB INDIA LTD. (INTERN)

Dec. 2014 – Jan. 2015

- Designed bracket set in SolidWorks for holding hydraulic hoses in firm position beside rear boom mounting.
- Analyzed various sections of fabrication work including welding, CNC cutting and bending.
- Studied assembly line for variants of backhoe loaders, excavators and compactors.
- Interpreted data on sales and market value of JCB machines as compared to competitors.

INDIA YAMAHA MOTOR PVT. LTD. (INTERN)

June – July 2014

- Acquired knowledge regarding Yamaha's manufacturing facility.
- Studied entire motorcycle assembly from chassis welding to engine assembly to dispatch.

PROJECTS

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- Designed and developed a pneumatic engine from a 97cc 4-Stroke Single-Cylinder motorcycle engine. Optimized the pneumatic cycle of engine for maximum power using an Alternate Cam. May 2015 – Apr. 2016
 - Designed and fabricated Slip-Gauge, used to calculate the slip percentage and slip ratio of 4WD and 2WD Tractors. **Patent Pending with Application No.: 201711028157.** The device can be used to calculate slip percentage and ratio for most off-road vehicle having front wheel and rear wheel rim diameter above 11" and 14" respectively. Jan. – Aug. 2017
 - Designed and developed a Mountain-Rope Intensity Cleaner. The product could thoroughly clean a climbing rope with varying intensity and least effort. It was developed as a project under Advanced Product Design course. Aug. – Dec. 2018

RELEVANT COURSEWORK

Advanced Product Design, Finite Element Analysis, Project Management, Machine Design, Design for Manufacturability.

HONORS, ACHIEVEMENTS AND EXTRA-CURRICULAR

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- Online tutoring in Physics, Chemistry and Mathematics. [<http://www.fiverr.com/syther>]
 - **Head Tutor-Mentor** at Academic Support Assistance Program (ASAP), University of Colorado, Boulder
 - 1st in school and merit in Green Olympiad organized by TERI.
 - 1st in school in National Standard Examination in Chemistry.
 - 3rd in Air Glider Design Competition.